

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-026641**Date Inspected:** 03-Nov-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** Fred Von Hoff**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Sections**Summary of Items Observed:**

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above.

This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

**Orthotropic Bridge Girder (OBG) Sections:**

13E/14E – weld joint D-1: This weld joint requires the minimum preheat temperature (200°F) to be continuous during welding and post heating for 3 hours after the completion of welding. This QA Inspector observed QC Inspector Fred Von Hoff verify the minimum preheat and the following Flux Cored Arc Welding (FCAW) parameters for ABF welding personnel Jin Pei Wang; 275 amperes and 23.7 volts at a travel speed of 191 mm per minute to produce a heat input of 2.05 Kj per mm. The heat input and welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-3110-4 being used by the QC Inspector. This QA Inspector periodically observed QC Inspector Fred Von Hoff monitoring the welding at this location which included the welding parameters, preheat and interpass temperatures and in process visual inspections. This QA Inspector observed that welding was completed at approximately 1530 hours this date and the induction heating blanket had been repositioned over the weld joint to start the post weld heating. This QA Inspector was informed by QC Inspector Fred Von Hoff at approximately 1530 hours he would be leaving for the day and that QC Inspector John Pagliero would be taking over the QC functions at this location. Towards the end of the shift ABF Welding Supervisor Danny Ieraci (#3232) entered the job site connex and stated to this QA Inspector that he could not control the weather and was not responsible for the failure to maintain the post weld heating temperature, he



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abruptly left after this statement. This QA Inspector was not aware at this time what warranted this comment so QC Inspector John Pagliero was contacted and this QA Inspector was informed that rain water had started filling a void between the stiffeners on the top (inside) section of weld joint D-1 which in turn was cooling the base metal and preventing the induction heating equipment from maintaining a temperature greater than 200°F. QC Inspector John Pagliero informed this QA Inspector the first 1,000 mm (from weld joint C-2) was below 200°F and that the temperature appeared to maintaining at 120°F. QC Inspector John Pagliero was aware this was not in compliance with the contract requirements. This QA Inspector was not aware of any further action taken by ABF and/or QC personnel by the end of the shift this date. This QA Inspector was not aware that ABF personnel had taken any preventative measures to deal with the rain, which had been forecasted for several days.

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

### Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Hager,Craig	Quality Assurance Inspector
<b>Reviewed By:</b>	Levell,Bill	QA Reviewer

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